KUMARAGURU
college of technology
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Register Number:……

B.E DEGREE EXAMINATIONS: NOV/DEC 2014

(Regulation 2009)

Fifth Semester

AUTOMOBILE ENGINEERING

AUE108: Two and Three Wheeler Technology

Time: Three Hours **Maximum Marks: 100**

Answer all the Questions:-

PART A (10 x 1 = 10 Marks)

1. If Thermal efficiency of the S.I engine increases its Knocking tendency
   a) Increases b) Decreases
   c) No change d) Rapidly Increase
2. Reed Valve increases the _____of the engine
   a) Thermal efficiency b) Mechanical efficiency
   c) Volumetric efficiency d) Exhaust Manifold area
3. Decreasing Co-efficient of Friction
   a) Increase torque transmission capacity b) Decrease torque transmission capacity
   c) Decrease force acts on clutch plate d) No effect
4. _____frame is also called as engine stressed frame
   a) Diamond b) cradle
   c) Backbone d) Underbone
5. _____ is mostly preferred in sports cars.
   a) Disc wheel b) Wire wheel
   c) Magnesium alloy wheel d) Aluminum alloy wheel
6. An overinflated tyre will wear the tread most near the
   a) Edges b) Corners
   c) Outside d) Centre
7. Tyre pressure should be checked
   a) Weekly once b) Daily once
   c) Monthly once d) Yearly Once

8. Winter grade diesel is recommended for the temp _____

a) Above 40^0C b) Below -40^0C

c) Above 20^0C d) From -15^0C to 10^0C

9. Spark plug electrode gap should be around _____for Three Wheelers

a) 0.2 mm b) 0.4 mm

c) 0.6 mm d) 0.8 mm

10. _____grade oil is used as differential oil in three wheelers

a) SAE 5 W 90 b) SAE 140

c) SAE 20 W 40 d) SAE 15 W 30

PART B (10 x 2 = 20 Marks)

11. Discuss on a) Compression Ratio b) Delivery Ratio.
12. Brief about the Thermal Efficiency of the engine.
13. Compare Semi-Centrifugal Clutch with Centrifugal Clutch.
14. List out the a Advantages of Shaft drive.
15. Write about a) Leading Shoe b) Trailing Shoe in Drum Brakes.
16. What is independent suspension system?
17. Classify the types of maintenance.
18. What are the Causes for Engine misfiring?
19. Write down the procedure for Clutch plate replacement in Auto Rickshaw.
20. Write the Delivery Van Electrical Specification.

PART C (5 x 14 = 70 Marks)

21. a) (i) Specify the different types of scavenging process and summarize which type is best? Why? (8)

(ii) Explain the Advantages of Rotary Valve Engines. (6)

(OR)

b) (i) Explain the following a) Port fuel injection b) Throttle body fuel injection. (6)

(ii) Discuss in detail with neat sketches the Construction and working principle of Alternator. (8)

22. a) Explain the construction and working principle of Constant mesh Gearbox with neat sketch.

(OR)

	b)	(i)	Explain the construction and working principle of multi-plate clutch with neat sketch.	(10)
		(ii)	Sketch the Panel Meter and list out the Controls on Handle Bar.	(4)
23.	a)	(i)	Classify and discuss on types Disc Brake used in Automobile with neat sketch.	(7)
		(ii)	Distinguish between Drum and Disc Brake.	(7)
			(OR)	
	b)	(i)	Enumerate in detail the Construction of Tube Tyre with neat sketch.	(8)
		(ii)	Mention the advantages of Tubeless tyre.	(6)
24.	a)		List out the troubles in Two wheeler subsystems and explain causes and remedies for the troubles.	
			(OR)	
	b)	(i)	Explain the suspension system used in Bajaj pulsar 180.	(7)
		(ii)	Discuss about the Periodic checkups of Moped.	(7)
25.	a)		Explain the detailed Specifications of a Three wheeler.	
			(OR)	
	b)		Discuss about the servicing and maintenance of three wheelers.	

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